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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,680	10/22/2003	Aaron Seung-Joon Rhee	DOW-31780	6141
29423 7590 03/19/2007 WHYTE HIRSCHBOECK DUDEK S.C. 555 EAST WELLS STREET SUITE 1900 MILWAUKEE, WI 53202			EXAMINER DANIELS, MATTHEW J	
			ART UNIT 1732	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/19/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/690,680	<b>Applicant(s)</b> RHEE ET AL.	
	<b>Examiner</b> Matthew J. Daniels	<b>Art Unit</b> 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. **Claim 3** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This claim recites “about 100 ppm” which incorporates some values above 100 ppm. The scope of Claim 1 recites an endpoint of 100 ppm, and therefore Claim 3 broadens the endpoint to include values above, but about, 100 ppm.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. The rejections of Claims 1-7 under 35 USC 102(b) over Matteodo is withdrawn. The rejection under 35 USC 103(a) is maintained and is presented below.
3. **Claims 1 and 3-7** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over McKinney (USPN 4430289). **As to Claim**

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1, according to the dictionary definition found in Merriam-Webster's Collegiate Dictionary (page 1299), "up to" refers to extension as far as a specified place (definition 1) or the limit (definition 2). Based upon the definition of "up to", the claim scope is interpreted to include 100 ppm.

The article of McKinney is inherently capable of performing the claimed intended use because it is inherently capable of stretching and wrapping. McKinney teaches film blowing (Abstract, line 3) a composition containing a first linear low density polyethylene resin (4:25) and 100 ppm by weight of zinc oxide particles having a mean particle size of less than 0.05 microns (3:35-40 and 4:20-21), which would inherently have improved the cling force of a stretch wrap film. **As to Claim 3**, McKinney teaches a range of 100 ppm to 20000 ppm zinc oxide (3:35-40). The Examiner has reconsidered his position with regard to this claim but maintains the position that these claims are anticipated by McKinney's teaching of 100 ppm (3:36-39). However, in the event that it is ultimately found that insufficient specificity exists in the reference to McKinney to anticipate the claimed range, it is also the Examiner's position that McKinney's teaching of the endpoint of the range at 100 ppm is sufficient to render the claimed limitations prima facie obvious in view of McKinney's teaching of "about 0.01" at 3:36-39. **As to Claim 4**, this aspect would have been inherent in the claimed method because McKinney teaches the same particle, particle size, and weight percent in the same material. **As to Claim 5**, McKinney teaches mixing a linear low density polyethylene resin with 100 to 500 ppm (3:35-40) of zinc oxide having a particle size of less than 0.05 microns (4:20-21), and forming the mixture into a film (4:36), which would have inherently been capable of stretching and wrapping. **As to Claim 6**, mixing was conducted while molten in McKinney's method (5:14-37). **As to Claim 7**, blow molding is a blown film process (4:37 and 5:1-13).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over McKinney (USPN 4430289) in view of Ealer (USPN 4594213). Claim 5 was rejected under 35 USC 102(b), or in the alternative, under 35 USC 103(a) as obvious over McKinney above. **As to Claim 8**, McKinney appears to be silent to the cast film process. However, Ealer teaches slot cast extrusion (column 9), which is interpreted to be a cast film process, and also that blow molding and slot cast extrusion can be used interchangeably (Columns 8-9). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Ealer into that of McKinney in order to produce the vastly improved optical properties of cast films over those of blow molded films (Ealer 9:56-60).

5. **Claims 1 and 3-7** are rejected under 35 U.S.C. 103(a) as obvious over Matteodo (USPN 5132344). **As to Claim 1**, according to the dictionary definition found in Merriam-Webster's Collegiate Dictionary (page 1299), "up to" refers to extension as far as a specified place (definition 1) or the limit (definition 2). Based upon the definition of "up to", the claim scope is interpreted to include 100 ppm.

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The article of Matteodo is inherently capable of performing the claimed intended use because it is inherently capable of stretching and wrapping. Matteodo teaches film blowing (5:26) a composition containing a first linear low density polyethylene resin (2:63-64) and 100 ppm by weight of zinc oxide particles having a mean particle size of 0.05 microns (3:33 and 2:35-36). The Examiner's position that Matteodo's teaching of the endpoint of the range at 100 ppm and a size of 0.05 microns is sufficient to render the claimed limitations prima facie obvious in order to provide resistance to coloration. **As to Claims 3**, Matteodo teaches a preferred range of 100 ppm (2:35-36) to 1500 ppm (3:53). The Examiner has reconsidered his position with regard to this claim but maintains the position that these claims are obvious over Matteodo's teaching of 100 ppm in order to provide resistance to coloration. **As to Claim 4**, this aspect would have been inherent in the claimed method because Matteodo teaches the same particle, particle size, and weight percent in the same material. **As to Claim 5**, Matteodo teaches mixing a linear low density polyethylene resin with 100 ppm (2:35-36) of zinc oxide having a particle size of 0.05 microns (3:33), and forming the mixture into a film (5:27), which would have inherently been capable of stretching and wrapping. **As to Claim 6**, mixing was conducted while molten in Matteodo's method (6:24-29). **As to Claim 7**, blow molding is a blown film process (5:27).

6. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Matteodo (USPN 5132344) in view of Ealer (USPN 4594213). Claim 5 was rejected under 35 USC 103(a) as obvious over Matteodo above. **As to Claim 8**, the rotomolding process of Matteodo casts a film (5:26-27), and thus could be interpreted to be a cast film process. However, in the alternative,

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Matteodo clearly suggests an extrusion process and that the compositions are especially suitable to the blown bubble process. However, Ealer teaches slot cast extrusion (column 9), which is interpreted to be a cast film process, and also that blow molding and slot cast extrusion can be used interchangeably (Columns 8-9). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Ealer into that of Matteodo in order to produce the vastly improved optical properties of cast films over those of blow molded films (Ealer 9:56-60).

### *Response to Arguments*

7. Applicant's arguments filed 12 December 2006 have been fully considered but they are not persuasive. The arguments appear to be on the following grounds:

- a) The claims have been amended to require less than about 100 ppm of the ultra-fine zinc oxide.
- b) Matteodo teaches many types of polyethylene, a range of weight percentages, a range of sizes.

While some of the particular elements may overlap with the claimed amounts, there is no teaching of the combination of a small amount of zinc oxide having a small average particle size.

To meet the claim would require picking and choosing from lists, and there is no example that falls within the claimed ranges. There is no reason why one of ordinary skill would select the claimed limitations.

- c) The results in the present application demonstrate surprising results which are not suggested by the reference to Matteodo.

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d) McKinney contains broad teachings of an inorganic material, with siliceous materials being preferred, incorporated from 100 ppm to 20,000 ppm, with 500 to 6000 ppm preferred. There is no teaching of stretch wrap films.

e) none of the examples cited by McKinney fall within the claimed ranges.

8. These arguments are not persuasive for the following reasons:

a) A dictionary definition has been supplied to support the Examiner's interpretation that "up to" is inclusive of the endpoints. See the Merriam-Webster Collegiate Dictionary definition of "up to" on page 1299. Related definitions of "up-to-date" and "up-to-the-minute" further support the interpretation that "up to" is endpoint inclusive. Page 3 of the interview summary shows discussion of "less than 100 ppm", but the instant claim language does not appear to include this limitation.

b, d, e) As to Matteodo, the rejection under 35 USC 102(b) is withdrawn. The independent claim of Matteodo requires about 500 ppm zinc oxide in Claim 1 (9:29). However, Matteodo also provides teaching that a larger range of 100 ppm to 2000 ppm also provides substantially the same resistance to coloration (2:35-45), which would render the claimed amount prima facie obvious in order to provide coloration effects while conserving zinc oxide powder. The particular amount would be a result effective variable in order to achieve the resistance to coloration effects disclosed by Matteodo at 2:39-45, and one of ordinary skill optimizing this color resistance would have arrived at the claimed invention.

As to McKinney, while there does not appear to be a particular example showing an example within the claimed range, McKinney provides Claim 8 which recites eleven claimed



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inorganic materials incorporated at a weight percent from “about 0.01” weight percent to about 2 weight percent (see claim 1). The Examiner asserts that sufficient specificity exists in the method of McKinney to anticipate the claim. However, in the alternative, one of ordinary skill would have optimized the size, amount, and type of inorganic filler in order to provide the antiblocking effect of McKinney in films which are to be embossed, which require less of the inorganic material than smooth films (4:50-61), making the particular amount of inorganic material a result-effective variable.

c) Tables 4.1 and 4.2 have been reconsidered. Series CS G, CS H, Ex. 4, and Ex. 5 presents a series of samples having decreasing amounts of zinc oxide (Table 4.1) and corresponding increasing cling force (Table 4.2). Series CS I, CS J, Ex. 6, and Ex. 7 provides substantially the same trend. It is noted that there does not appear to be any LLDPE sample presented without zinc oxide.

Applicant's remarks appear to assert that the increasing cling force at 10 ppm to 100 ppm zinc oxide is an unexpected result, but the results presented could instead be interpreted to show that increasing amounts of inorganic powder in LLDPE eliminate cling. It is unclear that elimination of the cling with increasing amounts of zinc oxide at or greater than 100 ppm would be an unexpected result, and it is noted that this is substantially what McKinney teaches (see the Abstract, “reduced block” and “increased slip”) at higher zinc loading levels. The Examiner's position is that the unexpected improvement of cling by inclusion of zinc oxide at the claimed loadings has not been established by the evidence in Tables 4.1 and 4.2.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Daniels whose telephone number is (571) 272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJD 3/14/07



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3/14/07